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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/733,657  | 12/11/2003  | Robert A. Pyles      | PO-8027/MD-03-32    | 2177             |
| 157 7590 09/04/2008<br>BAYER MATERIAL SCIENCE LLC<br>100 BAYER ROAD<br>PITTSBURGH, PA 15205 |             |                      |                     |                  |
| EXAMINER<br>DANIELS, MATTHEW J  |             |                      |                     |                  |
| ART UNIT  |             | PAPER NUMBER         |                     |                  |
| 1791  |             |                      |                     |                  |
| MAIL DATE   |             | DELIVERY MODE        |                     |                  |
| 09/04/2008  |             | PAPER                |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/733,657

**Applicant(s)**

PYLES ET AL.

**Examiner**

MATTHEW J. DANIELS

**Art Unit**

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21, 26 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 22, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Double Patenting/Terminal Disclaimer***

1. The terminal disclaimer filed on 27 May 2008 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 7,175,675 has been reviewed and is accepted. The terminal disclaimer has been recorded.
2. Double patenting rejections set forth previously are withdrawn.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-19 and 28** are rejected under 35 U.S.C. 103(a) as obvious over Pyles (WO 03/083207) in view of Mueller (US 4,320,939). The applied reference has a common assignee/inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(a) and 35 U.S.C. 102(e). Additional rejections under 35 USC 102(e) over USPN 6733543 or USPN 6949127 are deemed to be cumulative over this rejection because all three documents claim domestic priority to 10/106,788 having a filing date of 26 March 2002.

**As to Claim 1**, Pyles teaches a method of treating a plastic article comprising:

- (a) providing a thermoplastic or thermoset article (page 3, lines 1-13)

(b) contacting the article with a composition consisting of a dye and water used in an amount of 50 to 85 percent (page 5, lines 2-6), at least one carrier having the claimed formula used in an amount of 20 percent (page 5, lines 7-15), and a diol used in an amount from 10 to 25 percent (page 5, lines 16-31), which reads on the claimed invention.

(c) maintaining contact to form a treated article (page 9, line 17)

(d) removing (inherent)

Pyles is silent to the optical brightening agent. However, Mueller teaches that it is known to provide fluorescent dyes (2:60-3:3), which are optical brightening agents, on optical elements.

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Mueller, namely the use of a fluorescent or optical brightening dye, into the process of Pyles because (a) Pyles suggests dyes generally, and Mueller provides a dye, or (b) Mueller suggests that the dye be used in a coating system such as a wash solution or as a coating (4:5-25), which suggests use in the process of Pyles.

**As to Claim 2**, see Pyles, page 9, line 6.

**As to Claims 3-4**, see Pyles, page 9, line 6.

**As to Claim 5**, see Pyles, page 9, line 13.

**As to Claims 6-7**, see Pyles, page 5, lines 1-35.

**As to Claims 8-13**, see Pyles, pages 5 and 7.

**As to Claims 14-19**, see Pyles, page 5, line 34 and page 3.

**As to Claim 28**, see Pyles, page 9, lines 7-9.

4. **Claims 20 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Pyles (WO 03/083207) in view of Mueller (US 4,320,939), and further in view of Hurley (USPN 5846607). Pyles and Mueller teach the subject matter of Claim 1 above under 35 USC 103(a).

**As to Claims 20 and 21**, the Examiner asserts that a molded article (Pyles, Abstract) could fulfill the limitation drawn to a pellet. However, in the alternative, Hurley teaches that it is known to provide an additive coating comprising a pigment onto thermoplastic pellets (4:14-20), and to subsequently to melt the treated pellet to form a molten composition and introducing the molten composition into a mold (these aspects are inherent in injection molding, 11:7). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Hurley into that of Pyles because doing so would (1) allow incorporation of the pigments or other materials into the body of a product and (2) eliminate defects such as inhomogeneity which are especially apparent when color is avoided (3:57-61).

5. **Claim 26** is rejected under 35 U.S.C. 103(a) as being unpatentable over Pyles (WO 03/083207) in view of Mueller (US 4,320,939), and further in view of Dusenbury (USPN 3045315). Pyles and Mueller teach the subject matter of Claim 1 above under 35 USC 103(a). **As to Claim 26**, Pyles does teach immersion (dyeing bath, Abstract), but Pyles is silent to the plate. However, Dusenbury teaches that it is known to immerse articles in a bath where the treatment composition is introduced into the immersion tank through a plate having a plurality of perforations (Figure). It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Dusenbury into that of Pyles in order to maintain a constant temperature and liquid level (1:10-52).

***Allowable Subject Matter***

6. **Claims 22, 24, and 25** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

7. Applicant's arguments filed 27 May 2008 with respect to the Pyles reference have been fully considered but they are not persuasive. See the new rejections above. In view of Pyles' suggestion to use dyes, and Mueller's teaching of a fluorescent dye, the claimed invention would have been obvious.

8. Applicant's arguments and claim amendments filed 27 May 2008 with respect to the Kawashima reference have been fully considered and are persuasive. These rejections are withdrawn.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MATTHEW J. DANIELS whose telephone number is (571)272-2450. The examiner can normally be reached on Monday - Friday, 8:00 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Matthew J. Daniels/  
Primary Examiner, Art Unit 1791  
9/2/08